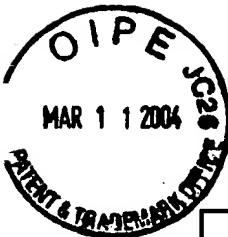




TRANSMITTAL OF APPEAL BRIEF		Docket No. KOLC-P02-030
In re Application of: Michael E. Rakauskas		
Application No. 09/309130	Filing Date May 10, 1999	Examiner Kruer, Kevin
Invention: LOW PRESSURE MELAMINE/VENEER PANEL		
<u>TO THE COMMISSIONER OF PATENTS:</u>		
Transmitted herewith in triplicate is the Appeal Brief in this application, with respect to the Notice of Appeal filed: <u>January 9, 2004</u>		
The fee for filing this Appeal Brief is <u>330.00</u>		
<input checked="" type="checkbox"/> Large Entity <input type="checkbox"/> Small Entity		
<input type="checkbox"/> A check in the amount of _____ is enclosed.		
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<input checked="" type="checkbox"/> The Director is hereby authorized to charge any additional fees that may be required or credit any overpayment to Deposit Account No. <u>18-1945</u> This sheet is submitted in duplicate.		
<i>William G. Gosz</i> William G. Gosz Attorney Reg. No. : 27,787 ROPES & GRAY LLP One International Place Boston, Massachusetts 02110-2624 (617) 951-7617		Dated: <u>March 9, 2004</u>



Image

AF/177318

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PTO/SB/17 (10-03)

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FEE TRANSMITTAL for FY 2004

Effective 10/01/2003, Patent fees are subject to annual revision.

Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT (\$ 330.00)

Complete if Known	
Application Number	09/309130
Filing Date	May 10, 1999
First Named Inventor	Michael E. Rakauskas
Examiner Name	Kruer, Kevin
Art Unit	1773
Attorney Docket No.	KOLC-P02-030

METHOD OF PAYMENT (check all that apply)

Check Credit Card Money Order Other None

Deposit Account:

Deposit Account Number 18-1945

Deposit Account Name Ropes & Gray LLP

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FEE CALCULATION

1. BASIC FILING FEE

Large Entity Small Entity

Fee Code	Fee (\$)	Fee Code	Fee (\$)	Fee Description	Fee Paid
1001	770	2001	385	Utility filing fee	
1002	340	2002	170	Design filing fee	
1003	530	2003	265	Plant filing fee	
1004	770	2004	385	Reissue filing fee	
1005	160	2005	80	Provisional filing fee	

SUBTOTAL (1) (\$ 0.00)

2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE

Total Claims	Extra Claims	Fee from below	Fee Paid
Independent Claims	-** =		
Multiple Dependent			

Large Entity Small Entity

Fee Code	Fee (\$)	Fee Code	Fee (\$)	Fee Description
1202	18	2202	9	Claims in excess of 20
1201	86	2201	43	Independent claims in excess of 3
1203	290	2203	145	Multiple dependent claim, if not paid
1204	86	2204	43	** Reissue independent claims over original patent
1205	18	2205	9	** Reissue claims in excess of 20 and over original patent

SUBTOTAL (2) (\$ 0.00)

**or number previously paid, if greater; For Reissues, see above

3. ADDITIONAL FEES

Large Entity Fee Code	Small Entity Fee Code	Fee (\$)	Fee (\$)	Fee Description	Fee Paid
1051	2051	130	65	Surcharge - late filing fee or oath	
1052	2052	50	25	Surcharge - late provisional filing fee or cover sheet.	
1053	1053	130	130	Non-English specification	
1812	1812	2,520	2,520	For filing a request for ex parte reexamination	
1804	1804	920*	920*	Requesting publication of SIR prior to Examiner action	
1805	1805	1,840*	1,840*	Requesting publication of SIR after Examiner action	
1251	2251	110	55	Extension for reply within first month	
1252	2252	420	210	Extension for reply within second month	
1253	2253	950	475	Extension for reply within third month	
1254	2254	1,480	740	Extension for reply within fourth month	
1255	2255	2,010	1,005	Extension for reply within fifth month	
1401	2401	330	165	Notice of Appeal	
1402	2402	330	165	Filing a brief in support of an appeal	330.00
1403	2403	290	145	Request for oral hearing	
1451	1451	1,510	1,510	Petition to institute a public use proceeding	
1452	2452	110	55	Petition to revive - unavoidable	
1453	2453	1,330	665	Petition to revive - unintentional	
1501	2501	1,330	665	Utility issue fee (or reissue)	
1502	2502	480	240	Design issue fee	
1503	2503	640	320	Plant issue fee	
1460	1460	130	130	Petitions to the Commissioner	
1807	1807	50	50	Processing fee under 37 CFR 1.17(q)	
1806	1806	180	180	Submission of Information Disclosure Stmt	
8021	8021	40	40	Recording each patent assignment per property (times number of properties)	
1809	2809	770	385	Filing a submission after final rejection (37 CFR 1.129(a))	
1810	2810	770	385	For each additional invention to be examined (37 CFR 1.129(b))	
1801	2801	770	385	Request for Continued Examination (RCE)	
1802	1802	900	900	Request for expedited examination of a design application	
Other fee (specify)					

*Reduced by Basic Filing Fee Paid

SUBTOTAL (3) (\$ 330.00)

SUBMITTED BY

(Complete if applicable)

Name (Print/Type)	William G. Gosz	Registration No. (Attorney/Agent)	27,787	Telephone	(617) 951-7617
Signature	William G. Gosz			Date	March 9, 2004



Attorney Docket No. KOLC-P02-030

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Applicant: Michael E. Rakauskas

Examiner: K. R. Kruer

Serial No.: 09/309,130

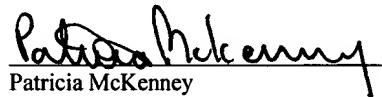
Art Unit: 1773

Filing Date: May 10, 1999

For: LOW PRESSURE MELAMINE/VENEER PANEL

CERTIFICATE OF MAILING UNDER 37 C.F.R. §1.8(a)

The undersigned hereby certifies that this document is being placed in the United States mail with first-class postage attached, addressed to the Commissioner for Patents, Mail Stop Appeals, on 3/9/04.


Patricia McKenney

Mail Stop Appeal
Commissioner for Patents
P.O. 1450
Alexandria, VA. 22313-1450
ATTENTION: Board of Patent Appeals and Interferences

Sir:

APPELLANT'S BRIEF ON APPEAL

This is an appeal to the Board of Patent Appeals and Interferences from the decision of the Examiner finally rejecting claims 17-25 and 37-49, and is in furtherance of the Notice of Appeal filed on January 9, 2004 in this application. The appealed claims are as set forth in the attached appendix. Provision for the payment of fees required for filing this brief, and any required extension of time for filing the brief, is submitted herewith. This brief is submitted in triplicate in accordance with the provisions of 37 C.F.R. §1.192(a).

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REAL PARTY IN INTEREST

The real party in interest in this appeal is Nevamar Company LLC, the assignee of the rights of the inventors in the above-identified patent application.

RELATED APPEALS AND INTERFERENCES

There are no related appeals or interferences that will directly affect, be directly affected by, or have a bearing on the Board's decision in this appeal.

STATUS OF CLAIMS

The status of the claims in this application is as follows. Claims 17, 19-25 and 37-49 are pending and are on appeal. Claim 18 is pending, but this claim is substantially duplicative of claim 17, and the Examiner's objection to this claim on that basis is not on appeal. Claims 17-25 and 37-49 were finally rejected on October 14, 2003. No claims have been allowed.

STATUS OF AMENDMENTS

An Amendment After Final Rejection was filed on January 9, 2004, but was not entered. An advisory action was mailed on February 9, 2004. The advisory action stated that the Amendment After Final Rejection would not be entered, and claims 17-25 and 37-49 remained rejected.

SUMMARY OF INVENTION

In one embodiment, the claimed invention relates to a laminated composite wood product comprising a rigid substrate layer having two substantially flat sides, a melamine resin-saturated

alpha cellulose sheets interposed on both sides of the substrate, and a single veneer layer affixed to one of said alpha cellulose sheets.

In another embodiment, the claimed invention relates to an unwarped laminated composite wood product made by a method comprising the steps of (a) forming a layered structure comprising a rigid substrate layer having two substantially flat sides, a resin-saturated alpha cellulose sheet layer disposed on each side, and a veneer layer disposed on the outer surface of only one of said sheet layers, wherein the alpha cellulose layers are simultaneously laminated to both sides of the substrate; and (b) subjecting the layered structure to elevated temperatures and pressures in a pressing apparatus for a time sufficient to cure said resin at said temperatures and pressures, said pressing apparatus comprising a first platen and a second platen, with the first platen operating at a temperature different from the second platen.

Laminated wood products suitable for use in the manufacture of household furniture pieces are typically prepared by adhering a natural hardwood veneer to a less expensive wood substrate. Such laminated wood products represent a substantial cost savings compared to the use of solid hardwoods, while being of comparable attractiveness and durability. Page 1, lines 13-25. Typically, the laminates are prepared by adhering the veneer to the core substrate with a melamine resin binder using heat and pressure. Page 1, line 31 to page 2, line 10. However, warpage of the laminate during manufacture represents a significant problem due to moisture contained within the laminate structure. Page 2, lines 28-37.

In the past, it has been proposed to use a veneer on each side of the substrate. However, in addition to being unnecessarily expensive, this approach is undesirable in certain applications, such as in displays. Page 3, lines 9-19.

The present invention is designed to overcome these difficulties, and to permit the manufacture of a superior laminated product, by employing the laminated structure and using the lamination process described above. Page 4, lines 1-5. The process of this invention permits the manufacture of a superior laminated product having a significant reduction in warpage. This is accomplished by limiting the penetration of moisture into the substrate of the laminate due to the simultaneous lamination of the resin-impregnated sheets to the substrate. Page 8, lines 14-36.

ISSUES

The issues to be decided in this appeal are as follows:

1. Whether claims 37-41 and 48 are unpatentable under 35 U.S.C. 103(a) as obvious over Baymiller et al. (U.S. Patent No. 3,816,236) in view of McClain et al. (U.S. Patent No. 1,299,747).
2. Whether claims 46 and 47 are unpatentable under 35 U.S.C. 103(a) as obvious over the Baymiller et al. patent in view of the McClain et al. patent , and further in view of Guyette (U.S. Patent No. 5,425,986).
3. Whether claims 42-45 are unpatentable under 35 U.S.C. 103(a) as obvious over the Baymiller et al. patent, in view of the McClain et al. patent, and further in view of Brooker et al. (U.S. Patent No. 5,723,221).
4. Whether claim 49 is unpatentable under 35 U.S.C. 103(a) as obvious over the Baymiller et al. patent in view of the McClain et al. patent, and further in view of Carter et al. (U.S. Patent No. 5,704,134) or Sunol (U.S. Patent No. 3,816,236).
5. Whether claims 37-41 and 48 are unpatentable under 35 U.S.C. 103(a) as obvious over Molloy et al. (U.S. Patent No. 3,916,059) in view of the Baymiller et al. patent.
6. Whether claims 46 and 47 are unpatentable under 35 U.S.C. 103(a) as obvious over the Molloy et al. patent in view of the Baymiller et al. patent, further in view of the Guyette et al. patent.
7. Whether claims 42-45 are unpatentable under 35 U.S.C. 103(a) as obvious over the Molloy et al. patent, in view of the Baymiller et al. patent and the Brooker et al. patent.

8. Whether claim 49 is unpatentable under 35 U.S.C. 103(a) as obvious over the Molloy et al. patent in view of the Baymiller et al. patent, and further in view of the Carter et al. patent or the Sunol patent.
9. Whether claims 17-21 and 24 are unpatentable under 35 U.S.C. 103(a) as obvious over the Baymiller et al. patent, in view of the McClain et al. patent and the Brooker et al. patent.

GROUPING OF CLAIMS

Claims 17-25 are directed to laminated composite wood products, and stand or fall together. Claims 37-49 are directed to methods for preparing unwarped laminated composite wood products, and these claims stand or fall together.

ARGUMENT

I. Rejection of Claims 37-41 and 48

Claims 37-41 and 48 have been rejected under 35 U.S.C. 103(a) as obvious over Baymiller (U.S. Patent No. 3,816,236) in view of McClain et al. (U.S. Patent No. 1,299,747). Appellants request reversal of this rejection by the Board.

The Examiner has stated that the laminated products taught by the Baymiller and McClain references, when combined, comprise a laminated product having the same layers in the same relative order as presently claimed in claims 37-41 and 48. The Examiner also states that the process limitations in claim 37 cannot serve to patentably distinguish these claims over the products described in the cited references.

Appellants agree that claim 37 is drafted in product-by-process format. Notwithstanding, appellants submit that the product features in claim 37 are adequate to rebut an inference of obviousness based on any combination of these references for the reasons set forth below.

Baymiller et al. is directed to a laminated board structure comprising a wood core, an intermediate cross-banding material, and a wood veneer finish outer layer. It is an objective of the Baymiller et al. reference to provide a stable laminate resistant to warpage. The intermediate cross-banding layer of Baymiller et al. is fabricated from a felt sheet which has been saturated with an uncatalyzed urea-formaldehyde adhesive resin. The felt is described in the reference as an open porous sheet which is saturated with the adhesive on both sides to provide adequate contact with the wood core and veneer. The cured structure is intended to be dimensionally stable and resistant to warpage and cracking. See col. 1, lines 40-56 of Baymiller et al.

Baymiller et al. further states that a felt sheet is suitable as a cross-banding intermediate layer since it is capable of being completely rewetted by water in 20 seconds when floated in water at 75°F. This rewetting characteristic is deemed by Baymiller et al. to be a critical feature since the success of the cross-banding material depends upon its ability to absorb the resin catalyst quickly and uniformly to cure the urea-formaldehyde resin. See col. 2, lines 38-46 of Baymiller et al. Moreover, Baymiller et al. teaches that the use of an uncatalyzed urea-formaldehyde resin is essential to the practice of the invention in view of its low cost and the relative ease of manufacturing control. Col. 3, line 26 to col. 4, line 4.

A significant deficiency of the Baymiller et al. reference is that it fails to teach or suggest that a resin-impregnated sheet can be applied to the non-veneered surface of the laminate as required in the appended claims. This deficiency has been noted by the Examiner in the prior Office Actions issued on this application. However, there are other deficiencies of the Baymiller et al. reference which are also noteworthy.

Unlike the claims of the present application which are directed to the use of alpha-cellulose sheets as binding layers, e.g. paper sheets (see page 5 of the present specification), Baymiller et al. requires the use of a felt cross-banding material with a high level of porosity to absorb the adhesive. In discussing the possible use of paper in place of felt, Baymiller et al. states that urea-formaldehyde kraft paper cross-banding materials do not completely rewet after 8

minutes of being floated in water, and would therefore not be an acceptable substitute for felt. See col. 2, lines 46-52 of the reference. Moreover, as noted previously, Baymiller et al. specifically directs one skilled in the art to the use of urea-formaldehyde resins adhesives, and away from the use of other resins such as melamine. Col. 3, line 26 to col. 4, line 4.

The McClain reference describes a composite lumber article formed by using intermediate sheets of a porous material, such as paper, fabric or felt, impregnated with an adhesive as a binding layer. See page 1, lines 64-73 of the reference. McClain also discloses that the binding layer can form a decorative surface layer for the laminate.

The McClain reference has been cited by the Examiner in order to overcome the deficiencies of Baymiller et al. by disclosing that a resin-impregnated binder sheet can be applied to the non-veneer surface of the laminate. In particular, McClain states that the binder sheet can be used as a surface sheet for wood structures, e.g. as a protective covering for furniture surfaces. Page 2, lines 115-130 of McClain. However, McClain specifically states that, in this configuration, the binder sheet is used as a moisture, oil and acid proof surface covering, and there is no disclosure that the binder can be used in this configuration to prevent warpage. See page 2, lines 119-122 of McClain.

Appellants do not agree that one skilled in this art would be motivated to combine the teachings of Baymiller et al. and McClain to thereby arrive at the present invention. In the first place, the claims of this invention require the use of melamine resin-saturated alpha cellulose (paper) sheet, while Baymiller et al. directs one skilled in the art to use a felt material as a binding layer. Since the McClain reference also discloses the use of felt as a binding material, the Examiner has provided no reasoning why one skilled in the art would substitute paper for felt, particularly in view of the explicit teachings in the Baymiller et al. reference away from the use of paper. Appellants submit that, one skilled in this art, following the combined teachings of both references, would not be motivated to substitute paper for felt as a binding layer.

Moreover, McClain only discloses the use of the binding layer as a top layer for purposes of providing a durable finish, and not to prevent warpage as is the case in the present invention. Therefore, one skilled in the art would only be motivated to use two sheets of paper as binding layers on alternate side of the wood core layer if one of those side was to be used as the face of a

decorative article. However, there is no indication that this would be a practical result with respect to the preparation of the laminate of this invention.

The Examiner has stated that although kraft paper is not the preferred cross-banding material disclosed in the reference, the use of felt is only one possible preferred embodiment, and that paper can also be used even though not preferred. The problem with this statement is that kraft paper is not an embodiment of the Baymiller reference at all. The felt sheet described in the Baymiller reference is not the preferred embodiment, it is the only embodiment. The reason that Baymiller is limited to a felt sheet is that only felt has the requisite porosity to enable the resin to saturate the sheet completely in a short period of time. See col. 1, lines 40-45 of Baymiller. The use of a kraft paper in Baymiller is rejected on the basis that kraft paper does not have the necessary porosity for absorption of the resin prior to curing. Thus, Baymiller actually teaches away from the use of kraft paper as a cross-banding material.

II. Rejection of Claims 46 and 47

Claims 46 and 47 have been rejected under 35 U.S.C. 103(a) as obvious over the Baymiller et al. patent in view of the McClain patent, and further in view of Guyette (U.S. Patent No. 5,425,986). Reversal of this rejection by the Board is respectfully requested.

Claims 46 and 47 both depend on claim 42, which in turn depends on claim 37. Claims 46 and 47 add certain limitations regarding the amount of resin used to prepare the laminate, and the type of alpha cellulose paper used in the laminate.

Initially, appellants position regarding the deficiencies of the Baymiller et al. and McClain references is stated above in connection with the previous ground of rejection (Section I, *supra*). Summarizing, appellants dispute that any combination of Baymiller et al. and McClain would either teach or suggest the laminated construction of claims 37, 42, 46 or 47.

The Guyette reference has apparently been cited by the Examiner as disclosing the amount of resin and type of paper claims in appellants' claims 46 and 47. These limitations are disclosed in col. 6, lines 47-52 of Guyette. Appellants note, however, that the limitations referred

to in Guyette are for alpha cellulose sheets, while both Baymiller et al. and McClain are directed to felt binding layers.

III. Rejection of Claims 42-45

Claims 42 to 45 have been rejected under 35 U.S.C. 103(a) as obvious over the Baymiller et al. patent in view of the McClain patent, and further in view of Brooker et al. (U.S. Patent No. 5,723,221). Reversal of this rejection by the Board is respectfully urged.

Claims 42 to 45 depend on claim 37 discussed above, and add limitations regarding melamine and melamine/urea as the resins used for impregnating the alpha cellulose sheets. The Brooker et al. reference is relied upon as disclosing that melamine and urea formaldehyde resins are interchangeable for use as adhesives to saturate paper sheets under high or low pressure lamination processes, and that various fillers can also be added to the adhesives.

Appellants point out that, notwithstanding the specific limitations of claims 42-45, the reasoning applied in Section I, *supra*, regarding the deficiencies of the Baymiller et al. and McClain references also applies to the laminates of claim 42-45.

IV. Rejection of Claim 49

Claim 49 stands rejected under 35 U.S.C. 103(a) as obvious over the Baymiller et al. patent, in view of the McClain patent, and further in view of Carter et al. (U.S. Patent No. 5,704,134) or Sunol (U.S. Patent No. 3,816,236). Reversal of this ground of rejection by the Board is respectfully urged.

Claim 49 depends on claim 37 discussed above. Claim 49 limits claim 37 to wood having a certain moisture content. The Carter et al. and Sunol references appear to have been cited as disclosing dried wood products having a reduced moisture content. Notwithstanding, the deficiencies of the Baymiller et al. and McClain references remain as stated in connection with the rejection of claim 37 (see Section I, *supra*).

V. Rejection of Claims 37-41 and 48

Claims 37-41 and claim 48 have been rejected under 35 U.S.C. 103(a) as being obvious over Molloy et al. (U.S. Patent No. 3,916,059) in view of the Baymiller et al. patent. Reversal of this ground of rejection is respectfully requested.

Molloy et al. is directed to crossbanding sheets for use in laminated furniture panels. The crossbanding sheets of Molloy et al. are made from a combination of glass fibers and cellulose fibers. The fibers of the Molloy et al. crossbanding sheet are oriented perpendicular to the grain of the wood core. See the Abstract of Molloy et al. The crossbanding sheets of Molloy et al. are said to permit the laminate to resist warpage by absorbing and releasing moisture. Col.1, lines 52-60 of the reference. Moreover, the crossbanding sheet of Molloy, et al. is sufficiently dense to prevent the adhesive from seeping through. See col. 2, lines 10-15. Molloy et al. specifically requires crossbanding layers made from a combination of glass fiber and cellulose fibers. The glass fibers are used for resistance to warpage, while the cellulose fibers absorb moisture. Note, in particular, col. 5, lines 17-25 of the reference. Molloy et al. can also be read as teaching that the absence of glass fibers in a binding layer is detrimental to the resistance of warpage.

The Examiner apparently contends that the Baymiller et al. reference overcomes the deficiencies of the Molloy et al. reference, at least with respect to the crossbanding layer of Molloy et al., by teaching the use of alpha cellulose as a cross banding layer. Not only does Baymiller et al. fail to teach the use of paper as a crossbanding material, Baymiller et al. requires the use of felt, e.g. cloth, for this purpose. See the discussion of Baymiller et al. in Section I *supra*. Moreover, appellants maintain that there is absolutely no basis for combining these references since each reference is directed to a distinctive type of crossbanding material, each having different functions and properties.

VI. Rejection of Claims 46 and 47

Claims 46 and 47 have been rejected under 35 U.S.C. 103(a) as obvious over the Molloy et al. patent in view of the Baymiller et al. patent, and further in view of the Guyette patent. The Board is respectfully urged to reverse this rejection.

Claims 46 and 47 depend on claim 42, which in turn depends on claim 37. Appellants position, as stated previously, is that the Molloy et al. and Baymiller et al. patents are not properly combinable, but even if they could be combined, they would still fail to teach or suggest the laminated construction with alpha cellulose layers as claimed in claims 37, 46 or 47. Moreover, the Guyette reference is not deemed to supply the critical deficiencies of either Molloy et al. or Baymiller et al. as noted in Section V, *supra*.

VII. Rejection of Claims 42-45

Claims 42-45 stand rejected under 35 U.S.C. 103(a) as obvious over the Molloy et al. patent, in view of the Baymiller et al. patent and the Brooker et al. patent. Reversal of this rejection by the Board is solicited.

Claims 42 to 45 depend on claim 37, but add limitations regarding the use of melamine and melamine/urea for impregnating alpha cellulose sheets to form a laminate. The Brooker et al. reference is relied upon as disclosing that melamine and urea formaldehyde resins can be used in related lamination processes. However, as discussed in detail in Section V *supra*, neither the Molloy et al. nor Baymiller et al. patents teach an alpha cellulose paper binding layer for preparing the laminated product as required by claims 42-45. Accordingly, claims 42-45 would not be obvious over the combination of Molloy et al., Baymiller et al., and Brooker et al. as alleged by the Examiner.

VIII. Rejection of Claim 49

Claim 49 stands rejected under 35 U.S.C. 103(a) as obvious over the Molloy et al. patent in view of the Baymiller et al. patent, and further in view of the Carter et al. or Sunol patents. The Board is urged to reverse this ground of rejection.

Claim 49 depends on claim 37, but limits claim 37 to wood substrates having a certain moisture content. Although the Carter et al. and Sunol patents describe wood products having a reduced moisture content, the deficiencies of Malloy et al. and Baymiller et al. remain as stated above in connection with the rejection of claim 37 (see Section V, *supra*). Consequently, claim 49 is deemed to be fully patentable over the cited references.

IX. Rejection of Claims 17-21 and 24

Claims 17-21 and 24 have been rejected under 35 U.S.C. 103(a) as obvious over the Baymiller et al. patent in view of the McClain patent and the Brooker et al. patent. Reversal of this ground of rejection by the Board is urged.

Claims 18-21 and 24 are dependent on claim 17. Claim 17 is directed to a laminated composite wood product having a substrate with melamine-saturated alpha cellulose sheets on each side of the substrate, and a veneer layer on the top of only one of the cellulose sheets.

As noted in Section I above, the Baymiller et al. reference is limited to the use of felt binding layers, and teaches away from the use of alpha cellulose paper. directed to the use of a felt material as a binding layer and not alpha cellulose paper. McClain also discloses the use of felt as a binding layer. Accordingly, one skilled the art, following the express teachings of Baymiller et al. and McClain, would not be motivated to use alpha cellulose paper as a binding material in place of felt, and would therefore not arrive at the invention claimed in claims 17-21 and 24. Contrary to the Examiner's position, kraft paper is not described in the Baymiller et al. reference as an alternative embodiment, but rather it is cited as an example of a non-working embodiment. The Booker et al. reference also fails to disclose the use of kraft paper as a binding material.

CONCLUSION

Claims 17-25 and 37-49 are believed to be fully patentable over the references cited in the final Office Action. A fair and objective reading of the cited references, particularly the

primary references, would not lead one skilled in the art to the presently claimed invention since (1) the references teach away from the use of alpha cellulose as an intermediate binding layer, and (2) the references fail to disclose the use of opposed binding layers for the purpose of preventing warpage in veneer laminates.

Accordingly, for the reasons presented in this brief, appellant respectfully urges the Board to reverse the rejections made in the Final Office Action, and to allow all of the appended claims.

Appellants hereby authorize the Commissioner, to debit the \$330.00 fee for filing this appeal brief from Appellant's Deposit Account No. 18-1945. If there are any other fees not accounted for above, Appellants hereby authorize the Commissioner to charge the fee to Deposit Account 18-1945.

Respectfully submitted,
ROPES & GRAY

Date: 3/9/04

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APPENDIX

17. A laminated composite wood product comprising a rigid substrate layer having two substantially flat sides, a melamine resin-saturated alpha cellulose sheet layer on each of said substantially flat sides, and a veneer layer on only one of said sheet layers.
18. The product of claim 17, wherein said resin of said resin-saturated sheet is a material comprising melamine.
19. The product of claim 18, wherein said resin of said resin-saturated sheet is a material comprising about 98 wt.% melamine.
20. The product of claim 18, wherein said resin of said resin-saturated sheet is a material comprising a melamine/urea blend.
21. The product of claim 20, wherein said resin of said resin-saturated sheet is a material comprising about 60 wt.% of melamine and about 40 wt.% of urea.
22. The product of claim 18, wherein said resin comprises about 45 wt.% to about 65 wt.% of the resin-saturated sheet.
23. The product of claim 17, wherein said sheet of said resin-saturated sheet is an alpha cellulose sheet having a basis weight of about 40 pounds per ream to about 100 pounds per ream.
24. The product of claim 17, wherein said rigid substrate layer is a material selected from the group consisting of particleboard, low-density fiberboard, medium-density fiberboard, and high-density fiberboard.

25. The product of claim 17, wherein said veneer layer comprises a wood material having a moisture content of about 7 wt.% to about 10 wt.% based on the weight of the veneer.

37. An unwarped laminated composite wood product made by a method comprising the steps of:

(a) forming a layered structure comprising a rigid substrate layer having two substantially flat sides, a resin-saturated alpha cellulose sheet layer disposed on each of said sides, and a veneer layer disposed on only one of said sheet layers, wherein the alpha cellulose layers are simultaneously laminated to both sides of the substrate; and

(b) subjecting said structure to elevated temperature and pressure in a pressing apparatus for a time sufficient to cure said resin at said temperature and pressure, said pressing apparatus comprising a first platen and a second platen, said first platen operating at a temperature different from an operating temperature of said second platen, to provide an unwarped, laminated composite wood product.

38. The laminated composite wood product of claim 37, wherein said operating temperature of said first platen is in a range of about 350°F to about 405°F, and said operating temperature of said second platen is in a range of about 320°F to about 350°F.

39. The laminated composite wood product of claim 37, wherein said pressing apparatus subjects the structure of step(a) to a pressure of about 325 psi to about 425 psi.

40. The laminated composite wood product of claim 37, wherein said time is about one minute or less.

41. The laminated composite wood product of claim 37, wherein said time is about 30 seconds to about 40 seconds.

42. The laminated composite wood product of claim 37, wherein said resin of said resin-saturated sheet is a material comprising melamine.

43. The laminated composite wood product of claim 42, wherein said resin of said resin-saturated sheet is a material comprising about 98 wt.% melamine.

44. The laminated composite wood product of claim 42, wherein said resin of said resin-saturated sheet is a material comprising a melamine/urea blend.

45. The laminated composite wood product of claim 44, wherein said resin of said resin-saturated sheet is a material comprising about 60 wt.% of melamine and about 40 wt.% of urea.

46. The laminated composite wood product of claim 42, wherein said resin comprises about 45 wt.% to about 65 wt.% of the resin-saturated sheet.

47. The laminated composite wood product of claim 42, wherein said sheet of said resin-saturated sheet is an alpha cellulose sheet having a basis weight of about 40 pounds per ream to about 100 pounds per ream.

48. The laminated composite wood product of claim 37, wherein said rigid substrate layer is a material selected from the group consisting of particleboard, low-density fiberboard, medium-density fiberboard, and high-density fiberboard.

49. The laminated composite wood product of claim 37, wherein said veneer layer comprises a wood material having a moisture content of about 7 wt.% to about 10 wt.% based on the weight of the veneer.